

RANDOM NUMBER GENERATOR

Abstract

A random number generator (10) comprising a plurality of voltage islands (12) on a chip (14), one or more latches (16) located on each of plurality of voltage islands (12), with one or more latches (16) adapted to capture the voltage value of the respective voltage island on which they are located as an input value of one or more latches (16), a control circuit (18) for randomly controlling the state of each of plurality of voltage islands (12) and for capturing an output value for each of one or more latches (16), and a conversion circuit (20) for producing decimal numbers from the output value for each of one or more latches (16). In one embodiment, control circuit (18) includes two or more clocks (30), a multiplexer (32) for each of plurality of voltage islands (12), and an enable circuit (34) for each of plurality of voltage islands (12).